

EXHIBIT 5

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UNITED STATES DISTRICT COURT

DISTRICT OF MINNESOTA

- - - - -
In Re:

Bair Hugger Forced Air Warming
Products Liability Litigation

This Document Relates To:

All Actions MDL No. 15-2666 (JNE/FLM)

- - - - -
DEPOSITION OF ALBERT P. VAN DUREN

VOLUME I, PAGES 1 - 326

MARCH 7, 2017

(The following is the deposition of ALBERT P. VAN DUREN, taken pursuant to Notice of Taking Deposition pursuant to Rule 30(b)(6) of the Federal Rules of Civil Procedure, via videotape, at the offices of Ciresi Conlin L.L.P., 225 South 6th Street, Suite 4600, Minneapolis, Minnesota, commencing at approximately 9:00 o'clock a.m., March 7, 2017.)

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1 P R O C E E D I N G S

2 (Witness sworn.)

3 ALBERT P. VAN DUREN

4 called as a witness, being first duly sworn,

5 was examined and testified as follows:

6 ADVERSE EXAMINATION

7 BY MR. BANKSTON:

8 Q. Good morning, Mr. Van Duren.

9 A. Good morning.

10 Q. We're going to skip some of the formalities
11 because I know you've been in that chair before, done
12 some depositions, so we won't go over all of that
13 today; I'm sure you're up to speed. But before we
14 dive in, I did want to talk to you, make sure that you
15 understood exactly what kind of deposition it is we're
16 taking today, and -- and by that I mean that today you
17 are appearing as a corporate representative for 3M.

18 Do you feel like you have an understanding of what
19 that is and what your purpose is here today?

20 A. I believe so.

21 Q. Okay. I'm going to be asking you questions,
22 and in response to these questions today you're going
23 to be giving testimony as though you're the voice of
24 3M. Obviously, I can't put 3M in that chair, so
25 somebody has to be chosen. I've been informed that

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1 difference between the 500 and the OR, is the changes
2 you talked about making it suitable for operating room
3 use?

4 A. That was -- that was one among many changes
5 that were made in that series of warming units to
6 distinguish them from warming units that were
7 specifically designed for use in the PACU or the ICU.

8 Q. Okay. What is the purpose of having a
9 filter on the Bair Hugger?

10 A. Well it had several purposes: one purpose
11 is to prevent the fouling of the internal components
12 of the Bair Hugger; the other is to reduce the
13 particulates that enter and exit the Bair Hugger.

14 Q. As -- in the field of --

15 When designing the Bair Hugger, why did the
16 company care about particulates coming in and out of
17 the Bair Hugger?

18 A. To keep the electronics and the sensors, the
19 fans and the heat exchangers from gathering debris and
20 fouling.

21 Q. Okay. When -- when -- I'm --

22 What I'm specifically referring to is that
23 when I asked you for the purpose, you gave me two
24 purposes, one being to foul -- not to foul up the
25 motor and the other to reduce particulates in and out

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1 A. Okay.

2 Q. The filter plays a safety function; right?

3 MR. BLACKWELL: Object as asked and
4 answered, but you can go ahead.

5 A. Well again, I think that the filter serves
6 two purposes: one is to prevent the fouling of the
7 internal components of the warming unit; and the other
8 is to minimize the amount of particulates that are
9 exhausted into the -- into the blanket.

10 Q. And that's a safety function; correct?

11 A. We -- we could view that as a safety
12 function.

13 Q. Okay. When the 505 was being validated in
14 its design, can you tell me what safety validation was
15 done with respect to the filter?

16 A. I do not believe that any particulate
17 filtration efficiency studies were completed at that
18 time.

19 Q. Okay.

20 A. And I should just point out, I guess
21 quickly, that the -- the filter media in the 505 was
22 again designated as 0.2-micron level. The filters
23 that were in the previous warming units, the previous
24 model 200s and the 250s and the 275s, were somewhere
25 around two microns, so 10 times less efficient or

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1 for the 505's filter?

2 MR. BLACKWELL: I object to the form of the
3 question.

4 A. Well again, the -- to --

5 To my knowledge, and based on my review of
6 the records that I have available to me, I didn't see
7 any testing related to particulate efficiency of the
8 filter media.

9 Q. Okay. And so I take it by that same token
10 there was no biological testing of the filter.

11 MR. BLACKWELL: I object to the form of the
12 question.

13 A. I'm unaware --

14 The company is unaware of any biological
15 testing conducted on the -- during the design of the
16 505.

17 Q. Okay. Let's talk a little bit, then, about
18 the new media that comes into play, the M20 media that
19 was introduced sometime in the 2000s period. Can you
20 tell me: When that design change was made, what did
21 the company do to ensure it was safe for the patients
22 it would be used on?

23 A. Well the --

24 When the media was replaced, the design
25 requirements specifications were again reviewed to

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1 With respect to the safety validation for
2 filter design, what requirements were -- there were
3 and what was actually done on the model 750, that's
4 not something you're prepared to talk about today.

5 MR. BLACKWELL: Object to the form of the
6 question.

7 A. Well I mean I -- again, I can tell you that
8 the -- there is a -- a control document, a design
9 requirement specification, and it's controlled in the
10 sense that it's like an ECO, that any requirement
11 that's on that document is approved and signed off and
12 it doesn't change without some sort of tracking
13 occurring, that all of those specifications were met
14 in -- in a -- or validated finally before the product
15 was put on the market.

16 Q. Okay. But in terms of what was done
17 pursuant to those specifications to validate the
18 safety of this product with respect to airborne
19 contamination, you don't know that.

20 A. I don't know that a specific requirement for
21 airborne contamination exists on that document.

22 Q. Okay. Certainly, before the development of
23 the model 750, the company was aware of the potential
24 for airborne contamination and the necessity to take
25 steps to mitigate that.

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1 MR. BLACKWELL: I object to the form of the
2 question.

3 A. We were aware that customers had concerns or
4 perceptions about the level of particulates that might
5 be ejected from a -- a forced-air warming system.

6 Q. Well in fact if we --

7 When we looked at Exhibit 47 today in front
8 of you, in talking about the safety concerns that were
9 addressed in the 510(k), one of those was airborne
10 contamination; correct?

11 A. Yes.

12 Q. In other words, when the company was
13 designing the 505 and making filter decisions, it
14 understood that one risk that needed to be mitigated
15 was the potential for airborne contamination.

16 A. Yes.

17 Q. So the same can be said true of the model
18 750. During that time of development, the company
19 also understood that the product needed to take into
20 consideration the potential for airborne contamination
21 and take reasonable steps to mitigate that.

22 A. And it -- yes. And it did by including a
23 filter --

24 Q. Okay.

25 A. -- as one component of that system.

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1 Q. Okay. So as we saw, there was a certain
2 kind of filter on the model 505, and we talked about
3 how that was validated and all of those sorts of
4 things, so I'm --

5 With respect to the model 750 and its
6 filter, can you tell me specifically what was done to
7 ensure that that product was safe in terms of airborne
8 contamination?

9 MR. BLACKWELL: I object to the form of the
10 question.

11 A. You know, I mean I think I've answered it
12 the best I can. The -- the design requirements that
13 dictate how the product is designed are tested to
14 validate that the -- that those -- that the product
15 meets those requirements specifications, so that was
16 the -- in -- in total the amount of testing that was
17 completed to validate the model 750. Specifically, I
18 don't -- I do not think or do not recall that --
19 whether any safety testing, as you call it, was
20 conducted.

21 Q. And that would be because, at this point
22 anyway -- and I'm talking about the two thousand --
23 1999-to-2002 timeframe -- the company did not have an
24 appreciation of the importance of particulate matter
25 that could be ejected into the operating room from the

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1 Bair Hugger.

2 MR. BLACKWELL: I object to the form of the
3 question.

4 A. Well I -- I --

5 The company certainly had an indication that
6 it was important to the customers regarding the level
7 of particulate loading that might occur from a
8 forced-air warming unit.

9 Q. Okay. Now part of the reason that dictated
10 a choice of filter in the model 750 was an airflow
11 concern; correct?

12 A. Part of what, yes.

13 Q. In fact, it was a goal of the project of the
14 750 to create a device which delivered more air than
15 the previous device.

16 A. Yes.

17 Q. Okay. So the air-output specifications of
18 the unit changed and that in turn dictated some of the
19 choice for the filter.

20 A. One -- one of the many design considerations
21 that dictated that, yes.

22 Q. Okay. Before the 750 was ever released and
23 sold and used on a patient, what was done to ensure
24 that that change in air out -- output had no adverse
25 effect on airborne contamination issues?

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1 inconclusive as to whether or not the Bair Hugger unit
2 750 disrupts the sterile surgical field.

3 A. Well the 750 wasn't used in that study.

4 Q. Neither was the 505; correct?

5 A. No, I think it was the 505 in that study.

6 Q. 505E.

7 A. Well 505E, yes.

8 Q. Which has lower airflow than the 505.

9 A. Yes.

10 Q. Okay. And the 505E is not used in the
11 United States.

12 A. No, it is not.

13 Q. Okay. With respect to surgical site --
14 disruption of the -- of the sterile field, you do not
15 mention any CFD analysis. Did 3M do a CFD analysis,
16 third party?

17 A. Yes.

18 Q. Okay. Would that fall under this category
19 as well?

20 A. Well it's -- it's not a test, it's a -- it's
21 a computational analysis.

22 Q. Okay. Well I take testing and analysis and
23 calculations as all being tests in some way or other,
24 whether a physical test or a calculation test. Is
25 that fair? Is that the definition of testing?

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1 Q. What are the flaws of the Huang study when
2 you analyzed it?

3 A. I don't have my data here in front of me,
4 but I'm sure that I've written extensively on that
5 study.

6 Q. Do you agree the sample size was small?

7 A. Yes, I believe the sample size was pretty
8 small in the Huang study.

9 Q. It was only 16 people; correct?

10 A. Yeah, I think so.

11 Q. It used the Bair Hugger 505; correct?

12 A. I believe that's the unit that was used.

13 Q. And that has less airflow than the 750;
14 correct?

15 A. Yes.

16 Q. And Huang even acknowledges, and I think you
17 acknowledged it in the Moretti study, that there's a
18 higher count of particles or bacteria in the beginning
19 of surgery in room air because of unrestricted
20 movement of personnel in and out of an operating room.

21 A. Yes.

22 Q. So taking a sample size of CFUs or particles
23 when you first lay down the patient is really not a
24 good indicator of particles or CFUs with respect to
25 what's really going on in an operating room during

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1 coming from. Okay? Because particles are all over
2 the operating room and underneath the operating room
3 table and everywhere. Do you agree?

4 A. Yes.

5 Q. Okay. Based on the data that we have today,
6 including the study funded by 3M as well as other
7 studies, every single study indicates that the Bair
8 Hugger increases the particle count over the sterile
9 field; correct?

10 A. In absolute numbers, yes.

11 Q. Yes. Okay. And you have no internal
12 studies to refute that; correct?

13 A. No, we don't.

14 Q. What's defendants' knowledge and analysis of
15 third-party testing regarding whether or not the Bair
16 Hugger causes surgical-site infection?

17 A. Well again, the analysis that I showed you
18 that was done with the CDC data, for example. And the
19 secular trend of deep joint infection over the last
20 decade or so has generally declined in hip and knee
21 implant surgery, so at a -- at a macro level there
22 doesn't appear to be an increase in the number of
23 these infections despite the fact that patients are
24 generally older and sicker and there are more of them
25 now than there were a decade ago.

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1 analyzed or has knowledge of with respect to
2 disruption of the sterile field. Is that a study that
3 3M has -- has knowledge and analyzed?

4 A. Yes.

5 Q. It is a study funded by Augustine Medical;
6 correct?

7 A. Yes.

8 Q. And that study is flawed as well; isn't it?

9 MR. BLACKWELL: Object to the form of the
10 question.

11 A. I mean I -- in --

12 In what way?

13 Q. Well is it flawed?

14 A. Perhaps it could be flawed.

15 Q. Well --

16 A. It may have limitations.

17 Q. You -- you -- you -- you -- you stated that
18 all -- all studies are -- have some sort of flaws.

19 Are you saying this study does not have any flaws?

20 A. All -- all -- all clinical trials have
21 limitations in some way. There is no perfectly
22 conducted trial, which is why we have to do many of
23 them.

24 Q. Well Zink wasn't a clinical trial; was it?

25 A. It was a --

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1 A. Limitations.

2 Q. Limitations, flaws.

3 Based on this analysis and knowledge, has 3M
4 publicized these limitations of these studies of Zink
5 and Kurz and Huang and Avidan to the public, to the
6 consumers?

7 MR. BLACKWELL: Object to the question as
8 beyond the scope of the 30(b)(6) designation.

9 A. No, we have not.

10 Q. Switching subjects, you would agree that the
11 studies of third-party testing indicate that the Bair
12 Hugger unit harbors bacteria inside the device.

13 A. Well I would -- I would agree that bacteria
14 can be recovered from the interior of the device.

15 Q. Because the device is not sterile.

16 A. It's not sterile..

17 Q. And in fact, you're not -- 3M is not
18 disputing that the Bair Hugger blower and hose can
19 harbor bacteria inside the device.

20 A. We are not disputing that.

21 Q. Okay.

22 A. It's not sterile.

23 Q. Okay.

24 MR. ASSAAD: Take a five-minute break.

25 THE REPORTER: Off the record, please.

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1 A. That's one of its purposes.

2 Q. All right. And you had some questions posed
3 to you earlier today, or 3M did, that -- that shows --
4 pardon me -- with respect to knowledge about studies
5 and increased particle counts. Do you recall that
6 line of questioning?

7 A. Yes.

8 Q. And you testified on behalf of 3M that the
9 company is aware that -- that studies show increased
10 particle count when the Bair Hugger machine is turned
11 to warm setting in operating rooms; correct?

12 MR. BLACKWELL: Object to the form of the
13 question.

14 A. Trivial increases, yes.

15 Q. They --

16 But you are aware that the studies do show
17 increased rate of particle count in operating rooms
18 with the Bair Hugger set to warm; correct?

19 MR. BLACKWELL: Same objection.

20 A. Yes.

21 Q. And you'd agree that increased particle
22 count is something that 3M has never warned orthopedic
23 surgeons about; correct?

24 A. Not to my knowledge.

25 Q. So my question is -- is accurate?

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1 asked him about changes that were made to the
2 predicate device, which was the 200, which is what
3 this is a picture of.

4 MR. BLACKWELL: So Exhibit 351 relates to
5 the predicate device, the 200.

6 MS. ZIMMERMAN: Exactly. And the question
7 ultimately is: Why was the warning removed when we
8 got to the 500 series?

9 A. Well there's another difference, too, and
10 that is that the 200 was not intended to be used in
11 the operating room.

12 Q. Right. And -- and I'm aware of that, Mr.
13 Van Duren. My question really is -- has to do with
14 the knowledge that was available to the company
15 broadly at that time.

16 There -- there was some knowledge, based on
17 the fact that there is a warning of airborne
18 contamination, that contamination could be airborne;
19 correct?

20 A. Yes.

21 Q. Okay. And -- and despite that fact, there
22 is no warning on the 500 series of the Bair Hugger
23 device about risk of airborne contamination; correct?

24 A. That's correct.

25 Q. And that's despite the fact that the medical

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1 care professionals rely on the company to warn about
2 risks; correct?

3 MR. BLACKWELL: I object to the form of the
4 question.

5 A. The risks that are known of, known about,
6 yes.

7 Q. All right. And -- and -- and al --

8 That's also despite the fact that medical
9 care professionals rely on the company to provide
10 rules for safe use of a device; correct?

11 MR. BLACKWELL: I object to the form of the
12 question.

13 A. Yes.

14 And it's very likely that the hazard
15 analysis that occurred subsequent to the development
16 of this device recognized that the risk index was
17 either too low or zero and removed that warning from
18 the labeling.

19 MS. ZIMMERMAN: I'm going to move to strike
20 as non-responsive.

21 Q. Are you aware of any testing that -- that
22 showed that there was not airborne risk of
23 contamination --

24 A. I'm not.

25 Q. -- conducted by this study?

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1 A. I'm not.

2 Q. Or I'm sorry, conducted by the company.

3 A. No, I am not.

4 Q. Okay. So it's pure speculation on your
5 part.

6 Turning to the 700 series Bair Hugger,
7 was -- was there any changes on the warnings as
8 between the 700 series and the 500 series Bair
9 Huggers?

10 A. I believe there were some changes.

11 Q. And what were those changes?

12 A. I believe the recommendation not to hose
13 patients with the -- with the end of the nozzle was
14 added.

15 Q. And hose --

16 And hosing is a practice of essentially
17 using the machine without the disposable blanket
18 attached; correct?

19 A. That's right.

20 Q. All right. Were there any other changes?

21 A. I'm -- I'm --

22 I suspect there are. I don't -- I don't
23 know which ones changed between the two models though.

24 Q. So as you sit here today, the only change
25 that you are aware of between the 500 and 700 series

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1 with respect to the warnings has to do with the
2 warning not to engage in hosing; correct?

3 A. That's correct.

4 Q. All right. And you'd agree that there's no
5 warning on the 700 series, again, regarding the risk
6 of airborne contamination; correct?

7 A. That's correct.

8 Q. And again, that's despite the fact that the
9 risk of airborne contamination was in fact known to
10 the company at that time; correct?

11 MR. BLACKWELL: I object to the form of the
12 question.

13 A. It --

14 Well, it was included as a warning on the
15 model 200, yes.

16 Q. Okay. I'm going to turn to topic number
17 eight, which is data or research supporting the claim
18 that the Bair Hugger blankets act as an additional
19 filter or otherwise reduce the potential for
20 contamination in the operating room. You're prepared
21 to testify about that today as well; correct?

22 A. Yes.

23 Q. And I think you had some questions posed to
24 you earlier today by my colleague, Mr. Assaad,
25 regarding the Avidan study. Do you recall that?